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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,954

01/26/2004

David Miles

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08/05/2008

WOMBLE CARLYLE SANDRIDGE & RICE, PLLC

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EXAMINER

BROOKS, KRISTIE LATRICE

ART UNIT

PAPER NUMBER

1616

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/630,954

**Applicant(s)**

MILES, DAVID

**Examiner**

Kristie L. Brooks

**Art Unit**

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 66, 67, 79-81 and 99-103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66, 67, 79-81 and 99-103 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 66, 67, 79-81 and 99-103 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/23/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Status of Application**

1. Claims 66,67,79-81 and 99-103 are pending. Claims 99-103 are new claims.
  2. Receipt and consideration of Applicants remarks filed on May 23, 2008 is acknowledged.
  3. Rejections not reiterated from the previous Office Action are hereby withdrawn.
- The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1616

5. Claims 66,67,79-81 and 99-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al. (US 6,093,679) in view of Wright (US 6,277,788) and West (US 5,312,558).

Applicant claims a composition comprising 0.5 to 30 weight % of at least one chelating agent; 0.5 to 30 weight % cocodimethyl amine; 0.5 to 30 weight % cocodimethyl ammonium chloride; and at least 0.5 weight % of thiophanate-methyl (dimethyl(4,4'-o-phenylenebis(3- thioallophanate))).

#### **Determination of the scope and content of the prior art**

##### **(MPEP 2141.01)**

Azuma et al. teach efficacy enhancing composition for agricultural chemicals comprising agricultural chemicals (i.e. herbicides, fungicides, insecticides) such as, thiophanate-methyl, glyphosate and glufosinate, chelating agents such as, EDTA, citric or oxalic acid, a compound of formula (I) and a surfactant other than the compound of formula (I) (see the abstract, column 1 lines 10-13, column 3 18-21, column 8 lines 8-10, and column 9 lines 53-57 and 65-67). The compositions can be formulated with a nonionic, anionic, cationic (e.g. monoalkyl di-lower alkylamines and dialkyl mono-lower alkylamines), amphoteric surfactant or mixtures thereof (see column 5 lines 62-67 and column 6 lines 1-4 and 18-20). The weight ratio of a compound of formula (I) to an agricultural chemical is 0.03:1 to 50:1 (see column 3 lines 12-17). The weight ratio of a compound formula (I) to an surfactant other than the compound of formula (I) is 1:10 to 30:1 (see column 3 lines 9-11). The chelating agent is incorporated at a proportion in

Art Unit: 1616

the range of 0.05 to 15 moles per mole of the compound of formula (I) (see column 3 lines 1-6 and column 4 lines 35-39). The compositions can contain additional additives such as pH adjusting agents, thickener, emulsifiers, and carriers (see column 7 lines 2—22, 39-41, and 50-52). The compositions can be formulated in any manner such as a liquid, wettable powder, emulsion, etc (see column 7 lines 16-21).

**Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)**

Azuma et al. teach an efficacy enhancer composition for agricultural chemicals comprising agricultural chemicals (e.g. thiophanate-methyl, glyphosate), a compound of formula (I), a chelating agent (e.g. EDTA, citric acid) and surfactants (e.g. nonionic, anionic, cationic, and amphoteric). Azuma et al. do not teach the specific surfactants cocodimethyl amine and cocodimethyl ammonium chloride. Further, Azuma et al. do not teach the specific claimed range of amount of each component recited in instant claims. These deficiencies are cured by the teachings of Wright and West.

Wright teaches herbicidal compositions comprising an aqueous solution of glyphosate, a surfactant and water. The most useful surfactants for enhancing the effectiveness of the herbicidal composition are the cationic surfactants. Examples of some useful surfactants include alkyldimethylamines (i.e. cocodimethylamine). The amount of surfactant present in the solution is 20 to about 200 grams per liter (see column 7 lines 24-32).

West teaches a pesticide composition comprising a pesticide, an emulsifier and a formulation formed by combining a water dispersible solvent, an orthophosphonis acid, and cocodimethyl amine (see the entire article, especially the abstract). Examples of pesticides include insecticides, fungicides, etc. (see column2 lines 42-63). The molecular dispersions of the present invention provide unexpectedly good levels of pesticidal activity (see the entire article, especially column 1 lines 25-28). Emulsifiers or surfactants that are useful for producing a better product include cocodimethyl ammonium chloride (see the entire article, especially column 1 lines 49-51). The emulsifier or surfactant can be present in an amount of 0-25 parts by weight (see column 1 lines 30-36).

**Finding of prima facie obviousness**  
**Rational and Motivation (MPEP 2142-2143)**

One of ordinary skill in the art would have been motivated to incorporate cocodimethyl amine and cocodimethyl ammonium chloride into the compositions taught by Azuma et al. because Azuma et al. suggest the composition can preferably contain surfactants (e.g. nonionic, anionic, cationic, and amphoteric) other than the compound of formula (I).

Although Azuma et al. do not teach cocodimethyl amine, it is already known in the art that cocodimethyl amine is useful for enhancing the effectiveness of agricultural

Art Unit: 1616

chemicals as suggested by Wright. Furthermore, cocodimethyl amine is an alkyldimethylamine, and thus an obvious variation of cationic monoalkyl di-lower alkyl amines that may be used in the compositions taught by Azuma et al.

Although Azuma et al. do not teach cocodimethyl ammonium chloride, it is already known in the art that cocodimethyl ammonium chloride is useful in helping produce a better agricultural formulation as suggested by West.

Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate cocodimethyl amine and cocodimethyl ammonium chloride into the compositions taught by Azuma et al. because they are obvious variations of surfactants that are capable of enhancing the effectiveness of agricultural chemicals and improving the properties of the agricultural formulations.

Furthermore, although Azuma et al. do not teach the specific amounts of each component that can be used in the composition, Azuma et al. do suggest the weight ratio of each component compared to the compound of formula (I) and thus provides a suggestion of each amount that should be contained within the formulation. Thus, it would have been obvious, due to process optimization, in which it is well within the means of one of ordinary skill in the art to determine the appropriate amount of each component that is needed to achieve the most effective agricultural formulation.

Therefore, the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed invention.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie L. Brooks whose telephone number is (571) 272-9072. The examiner can normally be reached on M-F 8:30am-6:00pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Johann R. Richter/  
Supervisory Patent Examiner, Art Unit 1616